Whom do architects have in mind during design when users are absent? Observations from a design competition

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Abstract: As design processes become more complex, the distance between architects and their buildings' users increases. In large-scale projects, future users often remain absent or hypothetic during design, and in some design competitions, architects are not even allowed to interact with the client. This article considers whom architects design for in such a case, and how they imagine them. Through an in-depth case study of a real-world design process, it investigates what can be learned from what architects say about whom they have in mind during design. The findings reveal a gap between how users are considered in literature versus by the architects observed. Strikingly, the term 'user' is not used at all by the latter while corporeality seems to be largely absent in how they talk about whom they design for. These findings complete Kostof's model of homunculi and contribute to a more nuanced understanding of whom architects design for when futures users are absent or hypothetic.

Keywords: architects, architectural design, case studies, conversation analysis, design competitions, ethnography, users

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1 Introduction

Design processes in architecture are becoming increasingly complex due to the various requirements (e.g., sustainability, accessibility, heritage value) and the constellation of stakeholders involved (e.g., client bodies, consultants, contractors). Especially in large-scale projects, client and end-users do not coincide. Since the industrial revolution introduced a dichotomy between design processes and use practices (Redström, 2012), the gap between designers' intent and users' actual experience has grown (Crilly, Maier, & Clarkson, 2008).

Architects are expected to conceive environments with an eye to offering people a future experience, often without having access to their motivations, values and experiences. Designing for 'the other' is challenging, because others' spatial experience can differ from architects' due to differences in age, gender, (dis)ability, ethnicity, profession, etc. (Imrie, 2003).

Like for other designers, a crucial competence for architects is thus being able to empathize with future users (Cross, 2006; Dorst, 2006). In order to design a successful product or environment, designers need to fully understand people and their daily life, their needs and wishes (Crilly et al., 2008). Designing products or environments that embrace the diversity of people's preferences and needs requires genuine interest in 'the other'.

In design approaches like Inclusive Design, Universal Design/UD, or Design for All/DfA, designers "ensure that their products and services address the needs of the widest possible audience, irrespective of age or ability" (Design Council, 2009). Underlying these approaches seems to be the (implicit or explicit) assumption that, without them, designers tend to design for the so-called 'average user', i.e., "a six-foot-tall, 20-year-old male, with perfect vision and a good grip" (Fletcher, 2001).

Rather than for the 'average user', however, studies suggest that architects design primarily for either their peers (Kostof, 1989) or themselves (Imrie 2003). In large-scale projects they directly interact with the client, while future users often remain absent or hypothetic. When designing a public building, for instance, it is often unclear whom the future users will be. Moreover, in the context of some design competitions, architects are not even allowed to

interact with the client.[i]

The study reported here investigates whom architects design for when future users remain absent or hypothetic, and how they imagine them. While the abovementioned studies are mostly based on interviews with architects, we analyse a real-world design process in the context of a design competition as it unfolds. In doing so, we are interested not only in the building's future users, but in all people the architects take into account while designing. Central to the analysis is the question: what can we learn from what architects say about whom they have in mind when designing, and about how they imagine them?

2 Related work

Research on architectural design has for long now investigated how architects relate to clients, users and other stakeholders during design processes. The literature review reveals two approaches: how architects empirically interact with various actors during design, and how architecture, as a discipline, integrates and interacts with theoretical and conceptual models of the 'human being'.

Architects' interactions with other people, and their clients in particular, have been the subject of repeated interest (Schön, 1983; Cuff, 1991; Luck & McDonnell, 2005). Research shows that most architects rarely go beyond early conversational interactions to reach out to users' needs and expectations, merely considering them as **external informants** (Olsson, 2004). Design conversations enable architects to engage with users but nevertheless leave large gaps of communication, interpretation and, consequently, mutual understanding (Cairns, 1996; Lawson, 2005). By analyzing information exchanged during those early interactions, Luck and McDonnell (2005) underline how most conversations are indeed limited to short exchanges about functional and structural attributes, with few concerns for deeper phenomenological, perceptual and symbolic aspects. Considering users as punctual external informants, Martin et al. (2007) suggest, may be related to some kind of disciplinary isolation and product-oriented tradition in design education.

This tradition of considering users as external informants is also key to most post-occupancy evaluation studies. Research in this area is concerned with developing processes, management frameworks and tools to help architects (and other built environment professionals) in managing customers' service expectations, post-processes' and post-occupancy's assessments and satisfaction levels (Zeithaml, Berry and Parasuraman, 1993; Love and Holt, 2000; Maloney, 2002; Ling and Chong, 2005; Ng, Palaneeswaran and Kumaraswamy, 2011). Often the users' input is limited to short design evaluations, neglecting the fact that users' requirements and perception evolve over time, i.e. neglecting users' roles throughout the whole design process as it unfolds (Ahmed and Kangari, 1995).

This fundamental role is more thoroughly described in theoretical and conceptual models of the human being reviewed through the lense of architectural theory and history. The model of the user as **human body** has, since Vitruvius, nurtured many perspectives on architecture: architecture considered as a living organism, as a body itself, or as the built representation of

bodily geometry, measurement, symmetry and proportions (Rykwert, 1996; Dodds and Tavernor, 2002; Vesely, 2002; Van Herck and De Cauter, 2004). In stoic philosophy the body was considered as reflecting some divine order (Vesely, 2002), while the Cartesia body and mind dualism inspired Modernism, an architecture rather distanced from embodied experience (William and Bendelow, 1998; Frampton, 2002).

The human body considered as source of measures and proportions, as well as the imaginary surrounding the architectural concept, later nurtured Formaggio's aesthetic theory, i.e. the new architectural anthropomorphism (Frascari, 1987). This reintegration of corporeality in post-modernist eras was moreoever supported by the theories of phenomenologists (like Husserl or Merleau Ponty) who reinstated the body as anchor of our spatial perception and perception of our entire life-world (Merleau-Ponty, 2002). Phenomenologists consider the body's role in the constitution of knowledge in the broadest sense (Drake, 2001). Merleau-Ponty's and Pérez-Gomez' phenomenological, revelatory body coexisted with Vidler's psychoanalytic, repressed one: for the latter, architecture, considered as a projection of the interiorized body, conceptually becomes bodily (Smith, 2010). The relationship between human body, human perception and architecture thus became the point of departure of phenomenology applied to architectural theory and discourse (Dahlin, 2002; Pallasmaa, 2005).

Reviewing more recent architectural practices, Rob Imrie (2003) suggests that today architects seem to extract from the human body essentially mathematical proportions or functional dimensions, with less consideration for how a building is experienced bodily. He found that architects introduce alleged ideal measurements in architecture by using e.g. the *Metric Handbook* (Adler, 1999) or *Architects' Data* (Neufert and Neufert, 2000). Apart from this mathematical approach, contemporary architecture rarely considers the relationship between the built environment and the human body explicitly: "Most architects either have no

conception of the human body or conceive of it in reductive terms: that is, the body is either reduced to a mirror or self-referential image of the architects' body or … is normalised as a statistically balanced symmetrical figure" (Imrie, 2003).

Another model of the user in architectural design derives from social sciences. Social scientists construct a model of the social world and the actors populating it. Alfred Schutz (1962) considers these imaginary actors as a kind of puppet-show puppets, marionettes, *homunculi*. Rather than representing a biographically determined situation of an actor in the world, the *homunculus* combines elements derived from the scientific problem addressed. Since buildings are designed for a particular social context, Spiro Kostof (1989) contends, architects too construct a model of the social world and create *homunculi* who populate it. All living beings populating the built environment can be represented by these imaginary puppets. They are the built environment's future users modelled as imaginary actors. These homunculi are not real living beings that live in the architects' thoughts. They are ascribed only features that fit the world of architecture. They can be manipulated by architects at will into a figure with certain bodily and psychological characteristics, depending on the design problem they address at that moment.

This homunculus model, we argue, might help to understand design situations in which interaction with future users is impossible, e.g., because future users are unknown, and/or interaction with the client is forbidden, like in some design competitions. Architectural competitions have drawn researchers' attention, for their potential in terms of experimentation, innovation and research by design (Adamczyk, Bilodeau, Cormier and Chupin, 2004). They are of particular interest in the context of this study because of the distance the competition formula (sometimes artificially) creates between architects and users. Architectural competitions, with their 2500 years history, have been constantly searching a balance between creativity, legitimacy and efficiency. Shifting from one arrangement to

another, their historical evolution has tried to prevent the exploration phase to become too wasteful for the teams of architects involved (Kreiner, 2010). As a consequence, and apart from more recent forms of architectural competitions such as the "Dialogue-based architectural competition" (or DAC) that introduces additional moments of dialogues into the process (ibid.), end-users have almost systematically been kept away from competition procedures in order to streamline the process and save time. Except for some laypeople with a minimum degree of confidence and representation, end-users where moreover systematically kept out from jury compositions, professional knowledge appearing of vital importance when it comes to create quality in such a complex task as electing a piece of architecture (Rönn, 2011).

Most competitions, Kreiner (2007) argues, can consequently be considered as a peculiar form of dance in which architects are dancing with an absent partner: the client and, in some respects, the jury. Yet, if the users of the buildings are absent or even unknown during this dance, the question arises whom architects have in mind when designing.

4 Methods and material

In order to start addressing this question, we re-examined a data set collected during an ethnographic study of a real-world design process in an architecture firm. The study fits in with a series of case studies focusing on one particular real-world design project or firm at a time (e.g., Schön, 1983; Cross and Cross, 1996; Yaneva, 2009; Dogan and Nersessian, 2010). Such case studies foster detail, richness, and in-depth understanding (Flyvbjerg, 2006).

The firm whose design process was studied is a young Belgian architecture firm, established in 2007. The firm was selected multiple times for participation in Open Calls for Tender organised by the Flemish Government Architect (FGA), several of which they won. Their portfolio covers private housing and medium-scale public buildings. At the time of the

study, the firm counted four architects: two head architects (A1, A2), both in their thirties, and two junior architects (A3, A4). For the ethnographic study, the firm was chosen because of their willingness to participate, and the quality of their work, as can be derived from their frequent selection for Open Calls for Tender.

The design process studied involved a competition aimed at extending a town hall into an Administrative Centre and Social House, gathering all local services in a municipality. The choice to study a design process in a competition context was motivated by several methodological advantages (Lindekens, 2006): the fixed deadline clearly limits the design process in time; moreover, in order to be clear to the jury, the proposed concepts should be unmistakably represented when defended and are therefore better documented than when designing for a client.

For the study reported in this article, the case was selected in an information-oriented way (Flyvbjerg, 2006), i.e., on the basis of expectations about its information content. This way of sampling is used in order to maximize the utility of information from single cases. The design process studied was chosen as an extreme case, c.q., a case that is especially problematic in terms of distance between architects and users: not only are (part of) the users of the Administrative Centre and Social House unknown; apart from an introductory meeting with the client, the architects could interact with neither the client nor the known users (e.g., current employees of the municipality) during the design competition.

Ethnography is the systematic study of a culture of people, traditionally applied by anthropologists. The culture to be studied here originates from a shared practice rather than a shared ethnological background. Considering design practice as a culture allows examining in depth designers' everyday lives, their situated actions, what they say, and the meaning they construct (Cuff, 1992). It has been applied successfully to study the cultures of practice of,

e.g., engineering designers (e.g. Bucciarelli, 1994) and architects (e.g., Cuff, 1992; Yaneva, 2009).

Given the project's time frame, observing the architecture firm over a prolonged period of time, as in classic ethnographies, was unfeasible. Instead, their practice was studied through a focused ethnography, which compensates for shorter periods of time in the field with a more thorough preparation beforehand in getting to know the subject, use of audio-visual recording devices to capture activities, and a more iterative data analysis (Knoblauch, 2005).

The focused ethnographic study was conducted by two researchers one, with a background in social sciences, observed the design process 'from outside'; the other (researcher/architect or R/A), with a background in architecture, acted as design team member and experienced the process first-hand through participant observation (Gold, 1958). The study took place over a period of three months, during which both researchers were in the architecture firm full-time, i.e., five days a week. This allowed them to be present during most of the meetings, except the late evening discussions between the head architects. The researchers combined a variety of data collection methods, which were selected in consultation with the architecture firm: direct observation, video recording, audio recording of semi-structured interviews, and collection of documents and artefacts (the design brief, drawings, etc.).

Using video allowed to capture as many of the social interactions as possible (between persons, and between persons and objects), including verbal utterances, gestures, drawing activities and manipulations of representational artefacts. A setup with two cameras was used: one fixed camera recording the context of the meeting and an overview of the interactions, and one moving camera which captured in detail specific activities. As such, the researchers could record the situativity of each meeting. The use of video has the advantage that "the mechanical audiovisual fixation of an event, produces data much closer to the event itself than other kinds of re-presentation" (Jordan & Henderson 1995, p. 51). On the other hand, using

video inevitably also makes a first selection of what is recorded. In this case, the framing of the fixed camera, and the choices made in which details of interaction to record with the moving camera.

This real-time observation and recording of the architects' design process yielded a rich data set, including 25 hours of audio and 66 hours of video recordings captured during 21 design team meetings, site visits and follow-up meetings, and 284 design documents used and/or produced by the team. The case study presented here focuses on the video recordings of the design meetings, as these allowed us to study 'natural' conversations between the architects involved and thus to map whom they designed for in this design competition.

In order to find out whom architects have in mind in design situations where users are absent or hypothetic, and how they imagine them, we performed a microanalysis of the language used by the architects observed. We investigated what the video data tell us about how architects realize users during the design process. The video recordings' real-time character offers rich and detailed material. Based on these recordings, we analysed the discussions amongst design team members, in order to map who inhabits their thoughts while they design. By investigating how – with what words – the architects speak about users, we try to figure out who are their "imagined companions" (Ellis & Cuff, 1989), the people they think up to populate their architecture.

After all video recordings had been viewed, different phases in the design process were selected based on the frequent appearance of users – in whatever shape. Subsequently, selected phases (about 15 hours in total) were viewed again and 50 episodes in which the user was discussed frequently were transcribed, and translated into English. For the transcription, we used Gail Jefferson's (2004) notation system (see Table 1), as this is commonly used in Conversation Analysis (Oak, 2011).

Table 1 Part of the notation system that turned out to be relevant for our analysis

+	pause of 1 second (++ pause of 2 seconds, etc.)
…/…\...	indicator of simultaneous speech
-	incomplete or interrupted utterance
… ()	material is incomplete
(…)	unclear utterance
[]	unclear utterance, best assumption of the authors
	comment of the authors

Subsequently, the transcribed episodes were analysed in detail to identify terms referring to users. During this microanalysis, the findings from the long-term ethnography provided warrants for our analytic judgments. The microanalysis and larger ethnography were interdependent and co-constructed our understanding of whom the architects observed had in mind when designing.

5 Findings

The microanalysis reveals what terms architects use when talking about users during design. We discuss the terms in order of frequency, starting with those used more frequently.

'You'

The term used most frequently by the architects is '**you**': "Well, but you enter here and you climb two stairs or you take the elevator to the 2nd instead of the 1st [floor]." On the one hand, it might seem that 'you' is used to denote the performer of a series of actions: 'you' is the user who wanders around in the building, arrives by car, is looking for the entrance, or takes the staircase. This seems to suggest that the architects try to imagine what 'you' would do, so that they can understand what 'you' would like to know, or would need to understand the building.

In these cases, however, ‘you’ might as well be used as a necessary construct to make intelligible sentences, without intended meaning to point to a specific person.

On the other hand, the architects seem to verify the accuracy of their description of what could happen by referring to other architects present. They pass through various scenarios regarding what ‘you’ would like to do and why, based on which they draw conclusions. In this way, the architects try to tie up fellow architects by what ‘should be’, considering common architectural knowledge.

The term ‘you’ thus seems to refer either to no one, or to someone else than the architect speaking, be it an indeterminate person or a colleague. In the latter cases, the architects make clear that the actions are performed not by themselves, but by another person. In this way, they distance themselves from the user. And yet, without characterizing the user, the architects try to empathize with the imaginary user. This empathic relation is even reinforced when ‘you’ is further specified by expressions like “when you are mayor” or “you, as alderman”.

‘The people’, ‘They’

The architects use generalizing terms like ‘**the people**’ and ‘**they**’, especially when denoting a big group. In this way, all users are realized at once. These terms are often used to denote the performers of a particular scenario: a group of people moving as one mass and with a certain aim to and through the building.

When terms like ‘the people’ and ‘they’ are used, the user quickly becomes an abstract subject: feelings and needs are generalized and, as a result, the user becomes something indeterminate. Sometimes, however, the architects specify the general term “people” to denote a particular subgroup that meets a certain condition, such as “the people [...] who have an appointment with the mayor”, or “the people of the town hall”.

'I'

At times **the architects themselves** seem to become user. In these instances, their statements are often based on their own experiences and memories. The architects' experiences, wishes and needs then become the users' experiences, wishes and needs. Experiences can relate to other design processes, other users and other clients, but also to reference projects (precedents), life experience, or personal facts. They can serve as inspiration in the absence of real users. In addressing certain design problems the architects turn to what they know best: themselves. By using expressions like "I suppose", "I think", "I know" and "I find", they acknowledge that they consider themselves when taking design decisions. The architects use knowledge about themselves so that for a moment they become user.

Table 2 illustrates how an architect draws inspiration from his personal experiences as a child. At another point, an architect indicates, based on his own experiences, how a counter or copier room work or should work, or that he would not use the underground parking: "personally, I wouldn't do that either, I would never drive into an underground parking either, if I only need to stop by, then I just park somewhere [on the street]". The architects draw on personal anecdotes to take design decisions seemingly intuitively.

Table 2 Architect drawing inspiration from personal experience

A3: in [City X] you have such a childcare for when you go shopping or the like then you can drop your child there /ah yes\ we used to do that in former times ++ and that's also such an old building with a garden no but that's really for people who [reside] an afternoon in the city or who -
A1: so in fact the system of IKEA but without a store coupled with it
A3: but it can also be for something else if you + there's a church next to it and if you have to go to a service of a church a funeral or the like
A1: I've never heard of it actually except coupled with a store
A4: and you pay then simply per hour or something you put your card back in the payment machine and then ()

A3: but my mom worked in the hospital right next to it and it was handy if she had to be there for a few hours or so

Besides projecting their own values and wishes onto users whom we described as indeterminate, the architects themselves are allotted a user role too. In this way, their experiences and opinions are directly involved in the design process.

'Employees', 'inhabitants', 'staff'

Users were also referred to by terms referring to the **program/functions** (e.g., reception, waiting room), **roles** (e.g., staff, visitors), or **actions** being performed; general terms that characterize groups or people with a single specific attribute reflecting what they do. The architects observed seemed to refer to specific users especially at points where they tried to elaborate a specific detail of the design. They focused in particular on what people do, using terms that label the user without giving real emotional depth: the architects rarely spoke about experiences these users have. As a result, users are assigned mainly 'functional' names, suggesting that a human relationship with what they think and feel is lacking (see Table 3).

Table 3 Architect using generalizing terms

A1: now the refectory is really requested as a refectory where staff can go and eat /yes\ we'd like to open it up and foresee a space where the staff can really go eating and where externs can buy a coffee or eat something /yes\ perhaps at other rates /yes yes\ than the people of the town hall + so that it also provokes some activity in the park /yes\ and therefore also that we push it also rather deep into the park /yes\ as deep as possible in the park /yes that's beautiful\ because in this way we somewhat stimulate the use of the park if there's some movement the park will be used more and more by the population they have they sit there also in a very beautiful space so there a very nice terrace can be + arranged in the green

Occasionally, however, an empathic bond with "the population" or "the staff" seems to appear. In Table 4, for instance, one of the architects wonders how the staff would like working in a green environment.

Table 4 Architect trying to empathize with the staff

A2: and I think that it's also very pleasant for <u>the staff of the city</u> actually to work in such volumes with those trees around you and those treetops + to really sit in a forest /yes\ we have to make it more dense we have to make that park more dense /yes\ green isn't it in fact there is not much isn't it
A1: so if you're working that you then have the feeling that you sit in a treetop

In summary, the architects observed describe people in terms referring to functions, roles, and relations. The use of these terms might relate to the design brief's focus on the functional distribution.

The client

In the design process studied, **the client** is represented not directly, but indirectly by means of the design brief. Through this brief wishes and needs were concretized from the start. The first design meeting in the firm was mainly devoted to going through the brief, which one team member had been studying extensively and translated into surface diagrams.

Also later in the design process, the architects derived the client's (specific) needs and wishes from the brief, or from an introductory discussion between the client and all firms participating in the competition. Expressions like "they demand" or "they say" refer to things the client described in the brief or said during the introductory discussion. When an architect says "I don't know for sure, it's not well described + or explained in the discussion", this suggests that he wanted to draw on the brief or discussions with the client to obtain information about a certain problem.

Which users named in the design brief and introductory discussions do the architects refer to? In other words, what knowledge did they acquire about users by reading the brief? Table 5 illustrates which expressions architects adopted from the design brief; underlined terms literally appear in the brief.

Table 5 Terms literally corresponding to the design brief

A1: so there are more + the financial services where you as inhabitant + of the municipality doesn't have to go to but where the community services have to go to /yes\ the IT-support /yes\ + so these are such services there are also the offices of the aldermen /yes\ and their workspaces it's only people who want to see the aldermen or the mayor /yes\ these would also have to go /yes\ in the that first volume on the second floor /yes\
R/A: those of social affairs they request that meeting room actually more than the others because they very often well they request also privacy and a very well-thought arrangement because they are often confronted with it those other services well the land management and the leisure and the like and the civil affairs that's a bit less but well so now + land management that's more the building permits urbanism that's the largest service at this moment

In this fragment the architects refer to more specific users groups than when using generalizing terms like "people". The information they use to specify the user seems to come directly from the design brief. We already noted that architects refer to "staff", "visitors", "services", general terms that focus on the use of the space. The fragment above suggests that this may relate to the design brief's strong focus on the functional distribution. The brief thus provides the architects new information about the users, who nevertheless remain indeterminate beings.

The jury

During the design process studied, the architects refer explicitly to **the jury** that will judge the design. In a design competition, the jury decides which project answers the design brief best, and assigns the corresponding architecture firm the design commission. In this respect, it is logical that the architects pay attention to the jury and consider whom they have to deal with. To what extent this influences design decisions is not entirely clear. What is clear, however, is that during the design process studied the jury is present in the architects' minds.

At some point the architects consider taking into account the wishes, interests and preferred architectural style of the FGA, who will chair the jury. Here ‘the user’ is shaped by the competition’s procedure, in the sense that the architects are aware that they are designing as part of a competition launched by the FGA. The FGA thus momentarily becomes a user the architects take into account during design. In one design meeting, for instance, the architects wonder to what extent they need to fix the material choice for the final presentation. Somewhat later in the same meeting, they wonder whether the FGA will be present at this presentation.

Besides the FGA also other jury members are referred to. At some point an architect suggests that a particular jury member might have problems with their proposal. Some jury members seem to leave a strong impression. The architects even take into account jury comments on other projects they designed for earlier competitions. When discussing the location of the copier room, an architect points out that this was a point of discussion during another competition and that it is a highly sensitive matter for which a project can be penalized: “I’ve seen it before in other buildings for competitions that based on such things [like the location of the copier room] you get them [the jury] against you”.

During the design process, the architects thus consider the jury members who will judge the project. These members are not always seriously considered as users, yet they are referred to multiple times, suggesting that they too inhabit the architects’ imagination.

Peers

The colleagues who are seated around the table were already mentioned above. We pointed out that the term ‘you’ is used to involve other design team members in the discussion. In this way, colleagues are to some extent made into user. Yet, the architects observed also refer to peers, i.e. **colleague architects**, who cannot be present in the design meeting. For instance, when the researcher/architect makes a remark about “very pure volumes”, one of the partners

spontaneously refers to the late Ludwig Mies van der Rohe, whose architecture was known for this quality.

In the design process studied, colleagues and mentors are not always explicitly referred to as user. Presumably other architects do play a role in the background, e.g., when the architects observed browse through architecture books present in the room. Colleague architects thus do not seem to be considered as active users to shape the design, but rather inhabit the architects' thoughts in a latent way.

'The other'

By **'the other'** we refer to users who differ from the architects, be it physically, mentally, culturally, or age-wise. We devote a separate category to them because the architects observed tend to use specific terms to label them. 'You' never seems to be a person in a wheelchair; 'you' resembles the architects. When they speak about people who are different from themselves, apparently they find it necessary to give them a specific name. But in fact they rarely speak about people who differ from themselves. Apart from sporadic mentions 'the other' is hardly considered. When the architects do consider them, it is in relation to building accessibility. The design brief mentions explicitly that the services where contact with the citizens is important should be accessible to disabled people, but here the brief's influence seems rather limited.

When attempts are made to involve 'the other' in the design process, it is usually by the researcher/architect. Very telling in this respect is the last sentence of the fragment below (Table 6), wherein one of the head architects explains to the researcher/architect his view on the clarity of the circulation.

Table 6 Architect explaining his vision on the circulation

A1: […] so I think rather that it has to come from that clarity of circulation the visibility of

the different services or that you maybe even from outside through that transparency I'm thinking now of that reference image that you see counters from a distance that this can be the readability also of your design /hmm\ yes but then you' re goin g to s a y
im mediatel y but t hat's n ot for ever
yon e -

Building accessibility is mostly considered only when the architects observed speak about 'the other'. Or, perhaps even more likely, 'the other' is considered only when accessibility is discussed. A possible explanation for this might be found in the building regulation, or in the design brief which strongly emphasizes accessibility. Whichever the explanation, 'the other' is considered to a very limited extent by the architects observed.

'The user'

Interestingly the term '**user**' itself was not used in any of the episodes. Perhaps it is less common in architecture than in other design domains? Or perhaps the architects observed have a more practical view on users and realize them in terms that mean something in the design process, or that consider all users simultaneously. This might relate to the fact that the architects observed do not really know the future users of the building they are designing. In any case, in the design process studied, 'the user' is a term that the architects do not pronounce.

6 Discussion

The homunculus and the body in design practice

The literature on architectural design advances several models to describe users: users as *external informants*, as *human bodies*, or as *homunculi*. In the design process studied, architects referred to very different users: both real figures (the mayor, colleague architects) and imaginary ones. Rather than as 'users', they were referred to as 'you', 'the people', 'employees', 'the public'. While the users identified in the case study cannot be captured by a single model, the *homunculus* seems to come close: a miniature person who lives in

architects' thoughts and consists of "somatic good" (Kostof, 1989) which architects knead and shape during design. Especially its depiction as a deformable mass fits what we observed: users and their characteristics were developed simultaneously with the design. The architects observed created users and determined their behaviour, just like social scientists shape *homunculi* during their research.

The future town hall's user, for example, was continuously ascribed different features that fit what the architects observed wanted to investigate. When they considered the design's accessibility then the users were 'the other'; when they spoke about other architectural qualities jury members or other architects were involved in the discussion; when they addressed certain details the user became more detailed too, instead of 'you' the user became 'the employee'. The user is thus something the architects realize, usually as a function of the design problem they want to solve, or even becomes some material for negotiation with the other designers. The user's features are manipulated by the architects at will.

Architects' *homunculi* are portrayed by Kostof (1989) as featureless: they are shapeless without specific characteristics. In the design process studied, users are often described by the architects in abstract terms. Yet, sometimes they are ascribed specific characteristics: e.g., they are specified as being mayor or employee, or it is indicated why they want to visit the town hall. The features they are ascribed usually relate to what people do, in other words, to use. When we focus on the scenarios the architects devise to imagine the building's use, we do see a functional user with certain bodily functions, but to what extent does the user have a body? Something circulates and moves through the building, but what? To what extent is the user embodied in these scenarios?

Kostof (1989) characterizes architects' *homunculi* as disembodied actions: actions are not specifically ascribed to a person or their body but to the object itself. In the design process studied, this does not always seem to be the case: actions are mostly performed by a certain

person. It is, however, not always clear what body is assigned to this person. The terms the architects observed use are mostly gender neutral, so we do not know whether the user is ascribed a male or a female body. Is it an able-bodied body? The body of an architect? Is there simply no body, only a shapeless pile of "somatic good" (Kostof, 1989)? When the architects pay attention to accessibility and 'the other', another body seems to be discussed: the user can be seated in a wheelchair, or be vision impaired. Only then, the user's corporality is considered explicitly. The body, it seems, tends to disappear into the background of the design process until illness or disability bring it back forward to consciousness (Leder, 1990). For all other users the corporeality does not seem to be an issue. When we speak about scenarios, circulation, there is a certain notion of corporeality, but how outspoken it is, remains unclear. Perhaps the notion of corporeality is not appropriate to illustrate how architects approach users; implicitly it might have become associated with users experiencing some disability, as a consequence of explicit normative and legal expectations on that matter. Moreover, unlike what Imrie found in his study, in the design process studied here the architects observed made very little use of architectural handbooks like *Architects' Data* to seek information about the user, except for looking up the dimensions of a parking lot.

The user created after the architect's image?

According to Kostof (1989), architects tend to contend that the architecture and the design are responsible for creating the *homunculi*. The users and their characteristics may be developed simultaneously with the design, but the architects are still responsible for creating them. They are the ones who determine the *homunculi's* characteristics and behavior. In the design process studied, it is the architect who determines that the user does not want to park underground but prefers to park a bit further in the street, or takes the stairs instead of the elevator. The entire scenario is written by the architect, who in this way negotiates with the other architects around the table.

Architects thus do retain control over the user's behavior, yet this does not mean that their image of the user is unchangeable. The architects can adapt this image, but also other factors may be involved. For instance, an architect's personal vision can change when their own body changes. Studies suggest that when the architect's life-world changes, e.g., as a result of losing sight (Heylighen & Nijs, 2014), or having mobility problems (Hockenberry, 2006), the *homunculus* may change too.

An important role seems to be played also by the client: in the design process studied, users described in the design brief popped up amongst the users realized by the architects during the design process. Clients' needs and preferences remain largely hidden; they are merely implied in the design brief, leaving room for interpretation. Architects, as Kreiner (2007, p.13) suggests, therefore extract from the brief information that is not necessarily there, "but which would be consistent with their picture of the client". The architect who translated the design brief into surface diagrams was, to some extent, involved in this interpretation and, as a consequence, in shaping the model of users the team would consider later on in the design process. Also the other architects around the table could shape and change the image of the user.

The user, like the design, is created by a combination of multiple voices. The image of the user is thus not entirely in the architect's hands. To describe this heterogeneous composition of the user, Alex Wilkie (2010) advanced the notion of *user-assemblage*: rather than the 'product' of an individual author, users are composed by interweaving knowledge, technology, institutions. As a consequence, 'the user' does not exist; it is changeable and multiple editions of the user exist next to each other and are interwoven.

These multiple editions of the user vary in terms of their distance to the architect's perspective (Figure 1). As this distance increases, architects' knowledge about the user seems to become less certain. It might be easier for architects to talk about themselves and what they

need and feel, because they have first-hand knowledge about their own needs and feelings. Realizing users who belong to explicit normative and legal target groups might call for more attention to corporeality, while realizing users who simply differ from the architects themselves rather draws upon their imagination. According to Kees Dorst (2006) empathy can feed designers' imagination. By drawing upon their imagination, they are able to empathize with 'the other'. After all, the architects are not mayors or aldermen, neither are they receptionists. In the design process studied, the moments at which the architects really seemed to empathize with the users were sporadic. But they were definitely willing to realize all those other users.

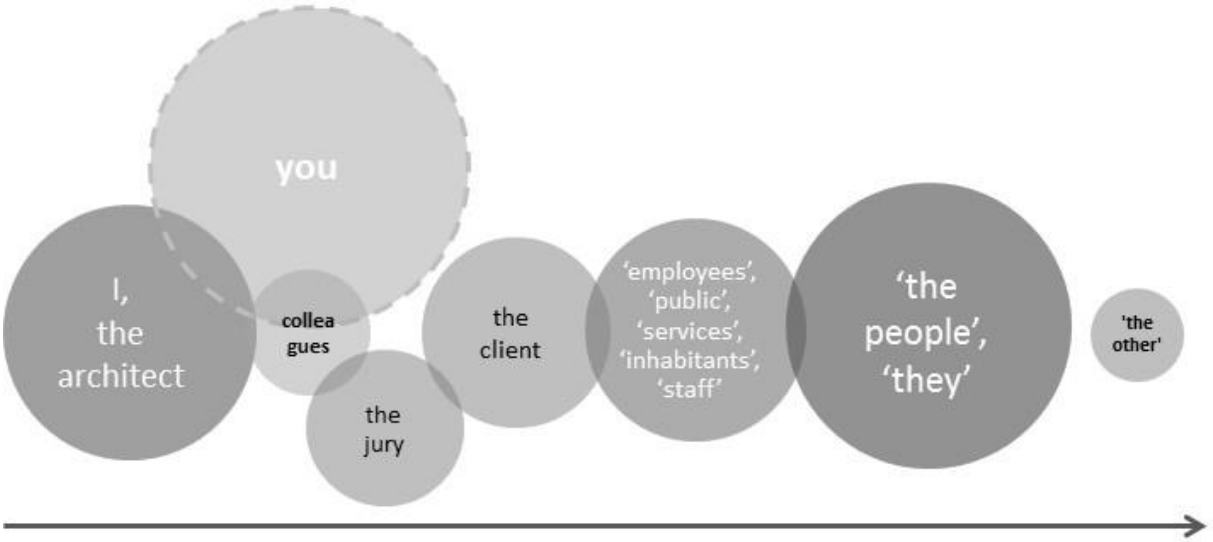

Figure 1 Different users realized by the architects observed and their distance to the architects' perspective. The diameter represents the relative frequency. 'You' is surrounded by a dashed line because not every 'you' points to a specific person.

Discrepancy between literature and practice

Literally speaking the term user means "someone who uses something." This does not cover all the "imagined companions" (Ellis & Cuff, 1989) of the architects observed, however. In this study, we were interested in all people whom the architects took into account during design. The group of users was thus extended with the client, who does not always use the building yet extensively shapes the design through the brief, but also with colleague-

architects, jury members, etc. Interestingly, the term ‘user’ was not directly used during the design process studied, and yet the architects seemed to have many companions.

When we consider the terms the architects observed did use, we notice a discrepancy between what the literature writes about users and how architects name them. Perhaps this should not come as a surprise as architects likely have a more practical view on users than theoretical models. Still, this discrepancy might play a role in how architects think about users, or do not think about them. What architects read or are taught likely plays a role in which users they realize.

During their education, most architects likely have heard about the Vitruvian man or Le Modulor. In design practice, however, few architects still referr to these representations. Several architects interviewed by Imrie (2003) admitted that they hardly reflect about the body while designing and that, when they do consider a body, it is mostly a reduced one. Looking at accessibility legislation, we notice that the guidelines focus mainly on people with a mobility impairment. Perhaps this might explain why architects mostly consider accessibility when they speak about ‘the other’. Or is it the other way around: perhaps this might explain why architects speak about ‘the other’ precisely when they consider accessibility? According to Imrie (2003), the guidelines contain no reference to the human body, but rather rational and scientific standards. Building regulations like accessibility legislation depict the user in a reduced way: it focuses on a particular group of users and reduces that group to dimensions and functional schemes of the space. The guidelines portray the user in a certain way that may determine the architect’s image.

While we cannot ascribe the discrepancy identified entirely to what architects read, hear and see, it is worth dwelling upon. Perhaps users’ real diversity cannot be captured in models and theories. Architects, our case study suggests, do not think in terms of user models, they think about users that have meaning for themselves. In the context of competitions, the

distance kept from the client as well as pressure related to peers and jury evaluations might even reinforce that personal meaning, creating even more distance between architects and users.

7 Conclusion

Our study analysed whom architects design for and how they imagine them when designing a public building whose users who are (partly) unknown, in the context of a design competition that does not allow them to interact with the client or (known) users. To this end we investigated what we can learn from what architects say about who they have in mind during design. In line with a situated notion of design cognition (Suchman, 1987), we acknowledge that a designer's language involves not only speaking, but also drawing and gesturing (Schön, 1983). In the study reported here we nevertheless chose to focus on the speaking part of the language to start with, and to leave the analysis of the drawing and gesturing part for another study (Elsen & Heylighen, 2014).

The users identified in the case study cannot be captured by one model: rather than the 'product' of an individual author, users appear as 'user assemblages', created by a combination of multiple voices (Wilkie, 2010). Of the several models described in literature, they seem to resonate most with the *homunculus* one: the user is ill-defined and ascribed features as a function of the problems the architects address. This homunculus is an ever-changing target, implicitly shaped and re-shaped by the design team as the design process unfolds: its consistency through time therefore highly depends on the team's shared common ground. Rather than thinking in terms of user models and theories, architects think about users who have meaning for themselves. Striking in this respect is the apparent absence of corporeality in what the architects observed say about users, except when referring to the "other". After all, we *all* experience architecture through our body: whether we are able-

bodied or disabled, we assess the quality of space, matter and scale by a combination of multiple senses (Pallasmaa, 2005). On the other hand, architects use tacit knowledge, which might not be articulated in design deliberations, so the lack of discussion on users' bodily experience does not necessarily imply that they do not think about it. Analysis of architects' drawings suggests indeed that they consider more sensory aspects than first meets the eye (Elsen & Heylighen, 2014).

Since the case study focused on one particular architecture firm only, the findings cannot be generalized to a larger group. Moreover, the analysis focuses on only one phase of the design process, i.e. the initial conceptual design phase. Although this phase is known to be the most influential, architects' consideration of and interaction with users and clients crosses multiple stages of the design (and construction) process. As we write, we are therefore studying design processes of three other architecture firms to investigate whom they consider during design, and what information this consideration is based upon (Van der Linden et al. 2016). For each firm, multiple projects are being analysed, which increases the chance that various phases in the design process are being considered.

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[i] Note tat also design competitions exist where participatory or co-design methods are used. However, in Flanders (Belgium) such competitions are very rare.